UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,807	08/15/2001	Daniel Price	SUN1P746/P6332	3576

22434 7590 07/14/2005	EXAMINER
BEYER WEAVER & THOMAS LLP P.O. BOX 70250 OAKLAND, CA 94612-0250	ZHEN, WEI Y

ART UNIT	PAPER NUMBER
2191	

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)
Office Action Summary	09/930,807	PRICE ET AL.
	Examiner	Art Unit
	Wei Zhen	2191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _28 April 2005_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-24_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-24_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 20050708

1.   This office action is in response to the RCE filed on 4/28/2005.

2.   Claims 1-24 are pending.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 14-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 14-16 recites computer program product comprises computer code which is non statutory as not being tangibly embodied in a manner so as to be executable.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cruz, "Linux Kernel: Problem with interfaces and ioctl", Aug 01 2001 in view of Weinstein, "zombie process" (Art of record).

As Per Claim 1, Cruz discloses having problems bringing down interfaces and identifying a parent process associated with a defunct child process (E.g. see page 1, lines 17, 19 and 21,

where the PIDs of defunct child process are (7729, 7732 and 8747) and the associated parent PID is 3278, and you can tell the process is in zombie state by the "Z'" in the column STAT)". Cruz doesn't explicitly disclose modifying the parent process associated with the defunct child process, wherein modifying the parent process by providing a thread associated with the parent process to collects exit information associated with the defunct child process.

However, Weinstein in an analogous art teaches modifying the parent process associated with the defunct child process, wherein modifying the parent process by providing a thread associated with the parent process to collects exit information associated with the defunct child process (see page 2, lines 35-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to get rid of zombies, as suggested by Weinstein, to Cruz. The modification would have been obvious because one of ordinary skill in the art would have been motivated to save the finite process table slots by deleting the dead (defunct/zombie) process.

As Per claim 4, the rejection of claim 1 is incorporated and further the combination of Cruz and Weinstein teach " modifying the parent process comprises altering the parent process to invoke wait () . . ." (Again, see as noted above of Claim 1).

As Per Claim 14, is the computer program product claim corresponding to the method claim 1 and is rejected under the same reason set forth in connection of the rejection of claim 1.

As Per Claim 17, is the apparatus claim corresponding to the method claim 1 and is rejected under the same reason set forth in connection of the rejection of claim 1.

5.   Claims 2-3, 5-6, 8-1 1, 13, 15-16, 18-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cruz, in view of Weinstein, and further in view of Faulkner et al., US patent No. 6,002,870 (Art of record).

See the previous office action for the rejections to these claims.

6.   Claims 7, 12 and 23 are rejected under 35 U.S.C. 103(a) ms being unpatentable over Cruz, in view of Weinstein, further in view of Faulkner, and further in view of Eaton, "Re: zombie "s" 1 Dec 1996.

Response to Arguments

7.   Applicant's arguments filed on 4/ have been fully considered but they are not persuasive. In the remark, Applicant has argued:

1)   Weinstein does not disclose modifying the parent process. It is not obvious to modifying the parent process to collect exit information.

Examiner's response:

1)   Weinstein discloses that process's parent to execute the wait system call. When the parent process is directed to execute the wait system call. It is modified/directed by providing a thread (wait system call) associated with the parent process.

Conclusion

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wei Zhen whose telephone number is 571-272-3708. The examiner can normally be reached on Monday-Friday 8:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wei Zhen
Primary Examiner
Art Unit 2191